




# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/901,109	07/10/2001	Ravindranath Droopad	210136US99	7228
22850	7590	12/14/2004		
OBLON, SPIVAK, MCCLELLAND, MAIER & NEUSTADT, P.C. 1940 DUKE STREET ALEXANDRIA, VA 22314			EXAMINER BAUMEISTER, BRADLEY W	
			ART UNIT	PAPER NUMBER
			2815	

DATE MAILED: 12/14/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No. 09/901,109	Applicant(s) DROOPAD ET AL.	
	Examiner B. William Baumeister	Art Unit 2815	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 01 November 2004.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 115-118 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 115-118 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>11/1/04</u> . | 6) <input type="checkbox"/> Other: _____  |

Art Unit: 2815

### **DETAILED ACTION**

1. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
2. The 103 rejections based on Guenzer, Kaushik, and JP '070 (see paragraph 6) and the double-patenting rejections as set forth in the non-final Office Action dated 6/12/03 are incorporated in their entirety into the present Office Action and are maintained with respect to the pending claims.

### ***Response to Arguments***

4. Applicant's arguments filed 11/1/04 have been fully considered but they are not fully persuasive.
  - a. Applicant asserts, *inter alia*, that the pending claims are allowable because Applicant has incorporated those suggestions that the Examiner previously recommended to Applicant's attorney during previous interviews.
  - b. Applicant's amendments do narrow the claims in the manner discussed by the Examiner and Applicant's attorney. However, the examiner also explained that in order for the claims to be allowable, Applicant would have to further ensure that neither the Kaushik nor Eisenbeiser articles constitute prior art. This was because while other prior-art references taught that it was known to form various layers and devices on perovskites and other metal oxides, the Kaushik and Eisenbeiser articles were the only two that disclosed forming monocrystalline SrTiO<sub>3</sub> on monocrystalline Si with an amorphous

Art Unit: 2815

SiOx interface layer in the manner presently claimed. However, because the present application was filed 2/25/03, and because Kaushik published 6/19/00 and Eisenbeiser published 3/6/00, both of these articles constitute 102(b)-based 103(a) prior-art references, and the new 103(c) provisions do not preclude their applicability as prior art.

- i. Applicant may wish to review MPEP 2004.14 including *In re von Lagenhoven*, 458 F2d 132, 173 USPQ 426 (CCPA 1972), cited therein, while studying how these references might be disqualified as prior art.
- ii. Applicant may wish to consider further limiting the claims to read on the alternative embodiment wherein the STO is made amorphous.
- c. Also, no Terminal Disclaimer has yet been filed.

#### ***Contact Information***

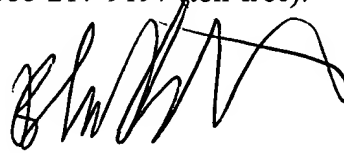
Any inquiry concerning this communication or earlier communications from the examiner should be directed to B. William Baumeister whose telephone number is (571) 272-1722. The examiner can normally be reached on M-F 8-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tom Thomas can be reached on (571) 272-1664. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 2815

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

**BRADLEY BAUMEISTER**  
**PRIMARY EXAMINER**



B. William Baumeister  
Primary Examiner  
Art Unit 2815

December 11, 2004